AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for allocating a network resource to a data path, comprising:

selecting a network path having a least number of hops to a destination;

determining if a sufficient amount of the network resource is available in ~~a~~ the network path to accommodate the data path; ~~obtaining a cost associated with using the network resource available in the network path for the data path;~~ and

deciding whether to allocate the network resource in the network path to the data path based on the amount of the network resource in the network path and the number of hops to the destination; ~~cost associated with using the network resource~~

wherein if the network resource is not allocated to the datapath, the method is repeated one or more times, each time using a network path having a progressively larger number of hops to the destination.

2. (Original) The method of claim 1, wherein the network resource comprises bandwidth.

3. (Currently Amended) The method of claim 1, wherein deciding comprises:

comparing the ~~cost~~ number of hops to a predetermined maximum acceptable cost.

4. (Cancelled)

5. (Currently Amended) The method of claim 1 [[4]], wherein the number of hops is obtained by reference to a topology database for determining a path between the source and the destination.

6. (Currently Amended) The method of claim 3, further comprising:

allocating, to the data path, the network resource available in the network path if (i) the ~~cost~~ number of hops is at or below the predetermined maximum acceptable cost, and (ii) there is enough of the network resource available in the network path to accommodate the data path.

7. (Currently Amended) The method of claim 1, wherein, if it is decided ~~not~~ to allocate the network resource, the method is not repeated ~~available in the network path to the data path, the method further comprises:~~

~~repeating determining, obtaining and deciding by substituting a network resource available to an Nth (N≥2) network path for the network resource available to the network path~~.

8. (Original) The method of claim 1, wherein the data path comprises a label switched path (LSP) on a multiprotocol label switching (MPLS) network.

9. (Original) The method of claim 1, wherein determining if enough of the network resource is available comprises:

determining an amount of the network resource that is available on the network path but that is not being used by existing data packets on the network path; and

comparing an amount of the network resource needed by the data path to the amount of the network resource that is available on the network path but that is not being used by the existing data packets.

10. (Original) The method of claim 1, wherein the data path has a predetermined priority level and deciding whether to allocate the network resource to the data path takes into account the predetermined priority level of the data path.

11. (Original) The method of claim 10, further comprising:

taking at least a portion of the network resource in the network path that is being used by a data path at a different priority level from the predetermined priority level to accommodate the data path at the predetermined priority level.

12. (Original) The method of claim 11, wherein the predetermined priority level is a higher priority level than the different priority level.

13. (Currently Amended) A method of configuring a label switched path (LSP) through a multiprotocol label switching (MPLS) network, the method comprising:

selecting a network path in the MPLS network that has a least number of hops to a destination;

determining if there is sufficient unused bandwidth on ~~a~~ the network path to accommodate the LSP; and

allocating the unused bandwidth of the network path to the LSP if there is sufficient unused bandwidth available;

wherein if the unused bandwidth is not allocated to the LSP, the method is repeated one or more times, each time with a network path having a progressively larger number of hops to the destination.

14. (Currently Amended) The method of claim 13, further comprising:

obtaining a cost associated with using the unused bandwidth on the network path for the LSP, the cost comprising a number of hops to the destination;

wherein allocating comprises using the unused bandwidth if the cost is below a predetermined maximum cost.

15 and 16. (Cancelled)

17. (Original) The method of claim 13, wherein the LSP has a predetermined priority level and allocating the unused bandwidth to the LSP takes into account the predetermined priority level of the LSP.

18. (Original) The method of claim 17, wherein allocating comprises taking at least a portion of the bandwidth in the network path that is being used by an LSP at a different priority level from the predetermined priority level for use by the LSP at the predetermined priority level.

19. (Original) The method of claim 18, wherein the predetermined priority level is a higher priority level than the different priority level.

20. (Currently Amended) A computer program stored on a computer-readable medium for allocating a network resource to a data path, the computer program comprising instructions that cause a processor to:

select a network path having a least number of hops to a destination;

determine if a sufficient amount of the network resource is available in a network path to accommodate the data path; ~~obtain a cost associated with using the network resource available in the network path for the data path~~; ~~and~~

decide whether to allocate the network resource in the network path to the data path based on the amount of the network resource in the network path and the number of hops to the destination; and ~~cost associated with using the network resource~~

repeat selecting, determining and deciding one or more times if the network resource is not allocated to the datapath, each time using a network path having a progressively larger number of hops to the destination.

21. (Original) The computer program of claim 20, wherein the network resource comprises bandwidth.

22. (Currently Amended) The computer program of claim 20, wherein deciding comprises:

comparing the ~~cost~~ number of hops to a predetermined maximum acceptable cost.

23. (Cancelled)

24. (Currently Amended) The computer program of claim 20 ~~23~~, wherein the number of hops is obtained by reference to a topology database for determining a path between the source and the destination.

25. (Currently Amended) The computer program of claim 22, further comprising instructions that cause the processor to:

allocate, to the data path, the network resource available in the network path if (i) the ~~cost~~ number of hops is at or below the predetermined maximum acceptable cost, and

(ii) there is enough of the network resource available in the network path to accommodate the data path.

26. (Currently Amended) The computer program of claim 20, further comprising instructions that cause the processor to:

~~repeat determining, obtaining and deciding by substituting a network resource available to an Nth (N≥2) network path for the network resource available to the network path if it is decided not to~~ allocate the network resource to the data path if it is decided to allocate the network resource ~~available in the network path to the data path~~.

27. (Original) The computer program of claim 20, wherein the data path comprises a label switched path (LSP) on a multiprotocol label switching (MPLS) network.

28. (Original) The computer program of claim 20, wherein determining if enough of the network resource is available comprises:

determining an amount of the network resource that is available on the network path but that is not being used by existing data packets on the network path; and

comparing an amount of the network resource needed by the data path to the amount of the network resource that is available on the network path but that is not being used by the existing data packets.

29. (Original) The computer program of claim 20, wherein the data path has a predetermined priority level and deciding whether to allocate the network resource to the data path takes into account the predetermined priority level of the data path.

30. (Original) The computer program of claim 29, further comprising instructions that cause the processor to:

take at least a portion of the network resource in the network path that is being used by a data path at a different priority level from the predetermined priority level to accommodate the data path at the predetermined priority level.

31. (Original) The computer program of claim 30, wherein the predetermined priority level is a higher priority level than the different priority level.

32. (Currently Amended) A computer program stored on a computer-readable medium for configuring a label switched path (LSP) through a multiprotocol label switching (MPLS) network, the computer program comprising instructions that cause a processor to:

select a network path in the MPLS network that has a least number of hops to a destination;

determine if there is sufficient unused bandwidth on ~~a~~ the network path to accommodate the LSP; ~~and~~

allocate the unused bandwidth of the network path to the LSP if there is sufficient unused bandwidth available; and

repeat selecting, determining, and allocating one or more times if the unused bandwidth is not allocated to the LSP, each time using a network path having a progressively larger number of hops to the destination.

33. (Currently Amended) The computer program of claim 32, further comprising instructions that cause the processor to:

obtain a cost associated with using the unused bandwidth on the network path for the LSP, the cost comprising a number of hops to the destination;

wherein allocating comprises using the unused bandwidth if the cost is below a predetermined maximum cost.

34 and 35. (Cancelled)

36. (Original) The computer program of claim 32, wherein the LSP has a predetermined priority level and allocating the unused bandwidth to the LSP takes into account the predetermined priority level of the LSP.

37. (Original) The computer program of claim 36, wherein allocating comprises taking at least a portion of the bandwidth in the network path that is being used by an LSP

at a different priority level from the predetermined priority level for use by the LSP at the predetermined priority level.

38. (Original) The computer program of claim 37, wherein the predetermined priority level is a higher priority level than the different priority level.

39. (Currently Amended) An apparatus for allocating a network resource to a data path, the apparatus comprising circuitry which:

selects a network path having a least number of hops to a destination;

determines if a sufficient amount of the network resource is available in ~~a~~ the network path to accommodate the data path; ~~obtains a cost associated with using the network resource available in the network path for the data path; and~~

decides whether to allocate the network resource in the network path to the data path based on the amount of the network resource in the network path and the number of hops to the destination; and ~~cost associated with using the network resource~~

repeats selecting, determining and deciding one or more times if the network resource is not allocated to the datapath, each time using a network path having a progressively larger number of hops to the destination.

40. (Original) The apparatus of claim 39, wherein the network resource comprises bandwidth.

41. (Currently Amended) The apparatus of claim 39, wherein deciding comprises: comparing the ~~cost~~ number of hops to a predetermined maximum acceptable cost.

42. (Cancelled)

43. (Currently Amended) The apparatus of claim 39 ~~42~~, wherein the number of hops is obtained by reference to a topology database for determining a path between the source and the destination.

44. (Currently Amended) The apparatus of claim 41, wherein the circuitry allocates, to the data path, the network resource available in the network path if (i) the number of hops ~~cost~~ is at or below the predetermined maximum acceptable cost, and (ii) there is enough of the network resource available in the network path to accommodate the data path.

45. (Currently Amended) The apparatus of claim 39, wherein, if it is decided ~~not~~ to allocate the network resource available in the network path to the data path, the circuitry ~~repeats determining, obtaining and deciding by substituting a network resource available to an Nth (N$2) network path for~~ allocates the network resource available to the network path.

46. (Original) The apparatus of claim 39, wherein the data path comprises a label switched path (LSP) on a multiprotocol label switching (MPLS) network.

47. (Original) The apparatus of claim 39, wherein determining if enough of the network resource is available comprises:

determining an amount of the network resource that is available on the network path but that is not being used by existing data packets on the network path; and

comparing an amount of the network resource needed by the data path to the amount of the network resource that is available on the network path but that is not being used by the existing data packets.

48. (Original) The apparatus of claim 39, wherein the data path has a predetermined priority level and deciding whether to allocate the network resource to the data path takes into account the predetermined priority level of the data path.

49. (Original) The apparatus of claim 48, wherein the circuitry takes at least a portion of the network resource in the network path that is being used by a data path at a different priority level from the predetermined priority level to accommodate the data path at the predetermined priority level.

50. (Original) The apparatus of claim 49, wherein the predetermined priority level is a higher priority level than the different priority level.

51. (Original) The apparatus of claim 39, wherein the circuitry comprises a memory which stores computer instructions and a processor which executes the computer instructions.

52. (Original) The apparatus of claim 39, wherein the circuitry comprises one or more of an integrated circuit and programmable logic.

Cont.

53. (Currently Amended) An apparatus for configuring a label switched path (LSP) through a multiprotocol label switching (MPLS) network, the apparatus comprising circuitry which:

selects a network path in the MPLS network that has a least number of hops to a destination;

determines if there is sufficient unused bandwidth on ~~a~~ the network path to accommodate the LSP; ~~and~~

allocates the unused bandwidth of the network path to the LSP if there is sufficient unused bandwidth available; and

repeats selecting, determining, and allocating one or more times if the unused bandwidth is not allocated to the LSP, each time using a network path having a progressively larger number of hops to the destination.

54. (Currently Amended) The apparatus of claim 53, wherein:

the circuitry obtains a cost associated with using the unused bandwidth on the network path for the LSP, the cost comprising a number of hops to the destination; and

allocating comprises using the unused bandwidth if the cost is below a predetermined maximum cost.

55 and 56. (Cancelled)

57. (Original) The apparatus of claim 53, wherein the LSP has a predetermined priority level and allocating the unused bandwidth to the LSP takes into account the predetermined priority level of the LSP.

58. (Original) The apparatus of claim 57, wherein allocating comprises taking at least a portion of the bandwidth in the network path that is being used by an LSP at a different priority level from the predetermined priority level for use by the LSP at the predetermined priority level.

59. (Original) The apparatus of claim 58, wherein the predetermined priority level is a higher priority level than the different priority level.